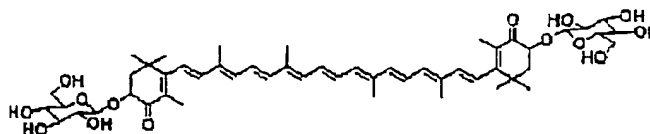


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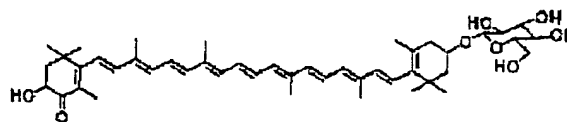


I

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INVENTOR : YOKOYAMA AKIHIRO;

INT.CL. : C12N 15/09 A01H 1/00 A23L 1/272
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 , C12R 1:01), (C12N 15/09 ,
 C12R 1:05), (C12N 15/09 , C12R
 1:18), (C12N 1/21 , C12R 1:19),
 (C12P 23/00 , C12R 1:19)



II

TITLE : CAROTENOID GLYCOSIDE AND ITS
 PRODUCTION

ABSTRACT : PROBLEM TO BE SOLVED: To produce a new carotenoid glycoside, comprising astaxanthin diglucoside and adonixanthin 3'-glucoside, having a high polarity and a high solubility in water and useful as a color tone improving agent for cultured fishes and shellfishes, a food additive, etc.

SOLUTION: This new carotenoid glycoside comprises astaxanthin diglucoside represented by a chemical structural formula of formula I and adonixanthin 3'-glucoside represented by a chemical structural formula of formula II, has a high polarity and a high solubility in water and is useful as a color tone improving agent for cultured fishes and shellfishes, a food additive, etc. The compounds are obtained by transferring all or a part of carotenoid biosynthesis genes crtE, crtB, crtI, crtY, crtZ, crtX and crtW into a microorganism, making the seven genes present therein so as to enable the expression, culturing the resultant transformed microorganism in a culture medium and collecting the prepared product from the resultant cultured product.

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